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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/695,118	10/28/2003	Dirk Broddin	XP-0801-DIV	6101		
21013	7590	07/31/2006	<table border="1"><tr><td>EXAMINER</td></tr><tr><td>LE, BRIAN Q</td></tr></table>		EXAMINER	LE, BRIAN Q
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AGFA CORPORATION LAW & PATENT DEPARTMENT 200 BALLARDVALE STREET WILMINGTON, MA 01887			ART UNIT	PAPER NUMBER		
			2624			

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/695,118	BRODDIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian Q. Le	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on Preliminary Amendment filed on 10/28/03.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,4 and 6 is/are rejected.
- 7) Claim(s) 3 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 October 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/28/03</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## ***Double Patenting***

### **Statutory Double Patenting**

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claim 4 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 3 of prior U.S. Patent No. 6,690,837. This is a double patenting rejection. Lines 1-12 of claim 3 of the Patent are substantially identical to claim 1 of the instant Applicant and further lines 13-18 are substantially identical set forth to the additional limitations of dependent claim 4 so that claim 3 of the Patent and claim 4 of the instant Applicant are identical in scope.

3. Claims 1-2, and 6 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-2, and 6 of copending Application No. 10/636,214. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented. Claim 1, lines 1-12 of the instant Application are identical in scope comparing to claim 1, lines 1-12 of the copending Application. Also, claim 2, lines 1-5 of the instant Application are identical in scope comparing to claim 2, lines 1-6 of the copending Application. In addition, claim 6, lines 1-12 of the instant Application are identical in scope comparing to claim 6, lines 1-16 of the copending Application. Because instant claims are identical in scope to copending Application claims; therefore, they are rejected as statutory double patent under 35 U.S.C. 101.

### Nonstatutory Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3 and 6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,690,837. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

- Each of the various limitations of the instant claims is substantially set forth in claim 1 of the Patent. In particular, the limitations of instant claim 1 are substantially identically defined in lines 1-12 of Patent claim 1. The additional limitations of instant claim 2 are substantially identically set forth at lines 14-17 of Patent claim 1, while the further limitations of instant claim 3 are defined in lines 18-22 of Patent claim 1 (Note, the instant claims refers to the microscopic

“difference” while the Patent claim refers to the microscopic “density”. If the meaning of these two terms is the same, then instant claim 3 is identical to Patent claim 1 and would be subject to a statutory double patent rejection under 35 U.S.C. 101). Because the instant claims use the transitional term “comprising”, they fail to preclude the additional limitations of the Patent claim. Furthermore, each limitation of the instant claims is stipulated by the Patent claim, so that the instant claims are anticipated by Patent claim, and therefore are obvious in view of the Patent. (Anticipation is “the ultimate or epitome of obviousness” (*In re Kalm*, 154 USPQ 10 (CCPA 1967), also *In re Dailey*, 178 USPQ 293 (CCPA 1973) and *In re Pearson*, 181 USPQ 641 (CCPA 1974)). Because instant claims are anticipated by the Patent’s claims, they are also obvious in view of the Patent’s claims.

- With respect to instant claim 6, this claim is directed a system that is defined by a series of operations that correspond to the method of instant claim 1. Because this method is anticipated by Patent claim 1, as pointed out above, the corresponding system would have been obvious to one of ordinary skill in view of Patent claim 1.

#### ***Claim Rejections - 35 USC § 112***

- The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claim 3 recites the limitation "said maximum and minimum microscopic difference" at lines 4-5 of the claim. There is insufficient antecedent basis for this limitation in the claim. None of the preceding claims languages recites or defines any such "microscopic difference" so that it is unclear what is referred to by the recitation.

*Specification*

8. Applicant is reminded of the format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. In this case, the abstract is over 150 words. Appropriate corrections are required.

*Claim Rejections - 35 USC § 102*

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. U.S. Patent No. 6,215,914.

Regarding claim 1, Nakamura teaches A method for reproducing an original image (column 19, lines 57-67 to column 20, line 1-4 and FIG 29A –29B) on an image carrier (printing unit) (column 29, lines 29-32 and FIG. 27, element 207) comprising the steps of:

generating (dividing image into image areas) (column 19, lines 57-63) a conjoined (overlapping between pictures) (column 19, lines 57-63) first and second sub-image, each representative for a portion of said original image (FIG. 29 A);

defining an overlap region (overlapping area deciding means) (column 21, lines 50-53) as a region (overlapping area) (column 21, lines 50-53) where both sub-images give a contribution to the integral optical density (density) (column 21, lines 54-50) of the image carrier (printing unit) (column 29, lines 29-32 and FIG. 27, element 207);

establishing (extracting) (column 10, lines 3-12) for each sub-image a peripheral edge in said overlap region (extract points on an edge as feature points to prepare for binarization process) (column 10, lines 3-12; FIG. 3; FIG. 4A);

increasing said contribution (increasing density value) (column 67, lines 25-27) by said first sub-image from said peripheral edge of said first sub-image to said peripheral edge of said second sub-image (the process of increasing the density values on either side of the sub-image base on the compensation factor/ratio to adjust the overall lightness of both pictures during the merging process to produce original image) (column 67, lines 20-30 and column 21, lines 65-67 to column 22, lines 1-18).

Regarding claim 6, Nakamura also teaches an imaging system (picture processing apparatus) (abstract, line 1) for reproducing an original image (column 19, lines 57-67 to column 20, line 1-4 and FIG 29A –29B) by an imaging device (picture processing apparatus) (abstract, line 1) on an image carrier (printing unit) (column 29, lines 29-32 and FIG. 27, element 207) comprising:

means for generating (dividing image into image areas) (column 19, lines 57-63) a conjoined (overlapping between pictures) (column 19, lines 57-63) first and second sub-image, each representative for a portion of said original image (FIG. 29 A);

means for defining an overlap region (overlapping area deciding means) (column 21, lines 50-53) as a region (overlapping area) (column 21, lines 50-53) where both sub-images give a contribution to the integral optical density (density) (column 21, lines 54-50) of the image carrier (printing unit) (column 29, lines 29-32 and FIG. 27, element 207);

means for establishing (extracting) (column 10, lines 3-12) for each sub-image a peripheral edge in said overlap region (extract points on an edge as feature points to prepare for binarization process) (column 10, lines 3-12; FIG. 3; FIG. 4A);

means for increasing said contribution (increasing density value) (column 67, lines 25-27) by said first sub-image from said peripheral edge of said first sub-image to said peripheral edge of said second sub-image (the process of increasing the density values on either side of the sub-image base on the compensation factor/ratio to adjust the overall lightness of both pictures during the merging process to produce original image) (column 67, lines 20-30 and column 21, lines 65-67 to column 22, lines 1-18).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. U.S. Patent No. 6,215,914 as applied to claim 1 above, and further in view of Delabastita et al. U.S. Patent No. 5,766,807.

Regarding claim 2, Nakamura does not explicitly teach a method of comprising steps of dividing said overlap region in a partition of microdots and assigning to at least one microdot an intermediate microscopic density substantially different from a minimum and maximum microscopic density of said microdots. Delabastita teaches a method of reproducing images (column 1, lines 5-8) further comprises steps of dividing (microdots assignment for tile) (column 7, lines 10-19) overlap region in a partition of microdots (since microdots are assigned to all the halftone dots of the image, thus the overlap region also is a partition of microdots) (column 9, lines 5-29) and assigning (assigning threshold value range to the overlapping portion) (column 10, lines 10-30) to at least one microdot an intermediate microscopic density substantially different from a minimum and maximum microscopic density of said microdots (when assigning threshold value range such as 148, 145 or fall within range 81 to 237 of the totally range from 1 (minimum microscopic density) to 255 (maximum microscopic density); this results the microdots values within this overlap region are substantially different from a minimum (0 value)

and maximum (255 value) microscopic density ) to overlapping portion (column 10, lines 10-30). Modifying Nakamura's method of reproducing image on an image carrier according to Delabastita would be able to dividing said overlap region in a partition of microdots and assigning to at least one microdot an intermediate microscopic density substantially different from a minimum and maximum microscopic density of said microdots. This would improve the reproduction characteristics of halftones e.g. improves the rendering of the highlights in halftoning (column 3, lines 42-58) and therefore, it would have been obvious to one of the ordinary skill in the art to modify Nakamura according to Delabastita.

13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. U.S. Patent No. 6,215,914 as applied to claim 1 above, and further in view of Delabastita et al. U.S. Patent No. 5,818,604.

Regarding claim 4, Nakamura does not explicitly teach the method comprising the steps of halftoning said first sub-image by a first frequency-modulated halftoning method; and halftoning said second sub-image by a second frequency modulated halftoning method, substantially non-correlated to said first frequency-modulated halftoning method. Delabastita discloses a method of improving aesthetic processing and printing reproducing images (abstract and column 1, lines 9-15) comprising the steps of halftoning (column 11, lines 35-37) said first sub-image by a first frequency-modulated halftoning method; and halftoning said second sub-image by a second frequency modulated halftoning method, substantially non-correlated to said first frequency-modulated halftoning method (Delabastita teaches a method of using different screen functions/different frequency-modulated halftoning techniques for screening different parts (regions) of the contone (grayscale) image. Thus, when using different frequency-

modulated halftoning techniques on different parts/regions of an image will result a non-correlation between frequency-modulated halftoning techniques) (column 11, lines 20-50, noting lines 32-34 in particular). Modifying Nakamura's method of reproducing image on an image carrier according to Delabastita would be able to halftone different sub-images with different/substantially non-correlated frequency-modulated halftoning methods. This would improve the characteristics of halftones especially able to alter the tone gradation for aesthetic purposes (column 11, lines 17-20) and therefore, it would have been obvious to one of the ordinary skill in the art to modify Nakamura according to Delabastita.

***Allowable Subject Matter***

14. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed in claim 1, prior arts teach an increasing of contribution of microscopic density (increasing density value) (Nakamura et al. U.S. Patent No. 6,215,914, column 67, lines 25-27). However, there are no prior arts that teach the step of increasing said contribution comprises increasing the microscopic density of said microdots by density steps being smaller than half the difference between said maximum and minimum microscopic difference (see limitation of claim 3).

## ***CONCLUSION***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to image reproducing in various aspects: halftoning, density adjustment and frequency modulated halftonging:

U.S. Pat. No. 5,818,604 to Delabastita et al., teaches high precision gradation compensation for stochastic screening.

U.S. Pat. No. 5,818,604 to Toriumi et al., teaches method and apparatus for forming a combined image signal.

U.S. Pat. No. 5,640,254 to Sexton, teaches method for applying FM screening to a digital image.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Q. Le whose telephone number is 571-272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BL

July 7, 2006